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ABSTRACT

This document, written by the American Automobile Association, deals with safety in snowmobile use. It reports accident records, lists safe driving steps and Canadian safety regulations, outlines snowmobile use regulations, and discusses courses of instruction. It also contains lists of available films and reference publications. (PB)

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SNOWMOBILES–
their use and control

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SP009 143

SNOWMOBILES— THEIR USE AND CONTROL

Unheard of a few years ago, the snowmobile has become a major mode of transportation and recreation in the snowbelt states and provinces. While sales in 1959 totaled less than 500, the International Snowmobile Industry Association retail sales show the following growth:

Season	Retail Sales
1962-63	10,000
1963-64	18,000
1964-65	30,000
1965-66	60,000
1966-67	120,000
1967-68	170,000
1968-69	265,000
1969-70	446,000
1970-71	572,000
1971-72	616,000

While accurate figures for all states are not available the following estimates for several states and provinces where snowmobiles are widely used provides an indication of the potential problem.

Minnesota	260,000
Michigan	207,000
Ontario	170,000
Quebec	225,000
Wisconsin	168,000

The Canadian Safety Council estimates that 750,000 snowmobiles were in use in Canada during the 1970-71 season.

The following information from the Bureau of Census gives the number of snowmobiles imported into the United States from Canada.

YEAR	SNOWMOBILES IMPORTED	AVERAGE VALUE	U.S. EXPORTS
1967	81,762	$446	–
1968	112,419	539	–
1969	182,330	608	10,521
1970	235,210	599	20,615

Accident Records

Snowmobiles are used primarily for recreation and secondly as a means of transportation at times and places when other transportation is not practical. Since snowmobiles are relatively new, regulation and safety programs have failed to keep pace with their use. Accurate information on accident records and use of snowmobiles is not generally available. The National Safety Council has compiled some information derived primarily from state officials. Highlights of that data are summarized below.

Snowmobile deaths for three recent seasons are as follows:

1968-69, 54: 1969-70, 84: 1970-71, 102.

During the 1970-71 season fatalities reported were as follows:

On the road accidents	42
Off the road involving water	19
Off the road not involving water	37
Unknown	4
Total	102

Of the total fatalities 67% involved the driver, 16% the passenger, 2% a spectator and 15% unknown.

For the 102 fatalities the major types of accidents included the following:

Collision with fixed object	33
Collision with motor vehicle	18
Terrain-mainly upset	15
Drowning-break through ice	14

56% of all fatalities, occurred on Saturday and Sunday

86% of all fatalities, involved males

Of the 102 fatalities, five states accounted for 82 as follows:

Michigan	25
New York	17
Minnesota	16
Wisconsin	13
Illinois	11

In Maine 30% of the injuries for one year were sustained by persons 20 to 29 years of age.

Comparable data have been developed for Canada by the Canadian Safety Council. During 1970-71 there were 112 fatal accidents in which 118 persons were killed. 55.3% involved collisions with other vehicles and 11.6% involved breaking through the ice or running into open water. 63.4% of the accidents occurred on public roads. Of these, 20 accidents involved collisions with parked vehicles.

A special report by the Ontario Department of Tourism and Information, indicates that the average snowmobile is used 42 days per year and 3.7 hours per day. The collision rate is three times that of cars for the same period of time.

Safe Driving Steps for Snowmobiles

Keep snowmobile in good mechanical condition and inspect before each trip.
Check lights, battery and drive belt.
Check lights before starting on a trip involving night driving.
Know the length of a round trip that can be made on a tank of gas and plan accordingly.
Advise a friend of your trip plans and when you plan to return.
Where practical, travel in pairs.
Keep off frozen lakes unless you are sure the ice is safe.

Drive on private property only with the owner's permission.
Carry extra repair parts and tools spark plug, driver belt, extra lamp bulbs wrenches, flash light, extra gas, etc.
Avoid disturbing wild life or chasing wild animals with a snowmobile.
Follow established trails.
Wear ample warm clothing. Allow for windchill temperatures.
In areas with fences, use extra care and avoid driving at night.
Carry guns only when in cases and unloaded.
Cross highways at right angles after coming to a complete stop and yielding to all oncoming traffic.
Do not drive while under the influence of alcohol or drugs.
Avoid driving in prohibited areas such as nurseries, interstate highways, etc.
Drive at a speed that is reasonable for conditions.
Use a rigid support when towing a sled or toboggan.
Avoid riding on the tracks of an operating railroad.
Lean into the hill when riding on the side of a hill.
When adding fuel shut off engine.
Never leave a snowmobile with the engine running. Take the key with you.
Helmets are recommended for head protection.
Wear dark goggles on bright days.
Wear heavy boots for warmth and protection.
Be alert for fences, guy wires, cables, stumps, etc.
Do not overload the snowmobile.

Sitting—for all normal driving, feet should be on the footboards, body midway back on the seat.

Snowmobile Regulations

In the snow belt states and provinces where snowmobiles are used extensively, rules and regulations for their control have been adopted. The regulations vary from state to state. A few of the major regulations are summarized below.

1. Registration Most states do not require registration, if used on the owner's land. About half the states require registrations when used on state or federally owned land. About half the states require registration when used in races and in special events.

   The registration fee varies from $2 to $15 with an average of about $8.00. The period covered varies from 1 to 3 years with an average of about 2 years.

   Out of state registration is honored from 10 to 90 days with the average being about 40 days.

   Practically all states require the display of a registration number at least 3" high.

2. Prohibited Areas Practically all states prohibit operation on state and limited access highways. About half prohibit operation on the railroad right-of-way and two-thirds prohibit operation on city streets.

3. Permitted Areas Nearly half the states permit operation on abandoned railroad right-of ways. Nearly all the states permit operation on unplowed roads not currently used by wheeled vehicles. Nearly half the states permit operation on the shoulders or on the highway right-of-way, but not on the traveled roadway. One-third of the states allow operation on the highway where it is necessary to cross a bridge.

4. Crossing Highways When crossing a highway, practically all states require the snowmobile operator to come to a complete stop, yield to all oncoming traffic and cross at right angles.

5. Minimum Age Generally there is no minimum age required for operating on the owner's property. The minimum age for crossing a highway varies from 12 to 16 with 16 being the most common requirement.

6. Equipment Required Practically all states require a headlight, taillight, brakes and muffler. One state requires the use of headlights during the day.

7. Liability Insurance Two states indicated that liability insurance was required.

8. Accident Reports Practically all states require the filing of accident reports if someone is injured or if property damage is $100 or $200.

9. License to Operate Half of the states reporting require a driver's license. Five states require young drivers to take a special course of instruction.

Canadian Safety Standards

The Federal Government of Canada has issued safety standards, most of which became effective in February, 1972. Some of the more important are summarized below.

1. Reflective material on the sides and rear
2. Must stop in 40 feet at 20 mph.
3. Must have vehicle identification number stamped on the frame.

	ALBERTA	IDAHO	MAINE	MANITOBA	MICHIGAN	MONTANA	MINNESOTA	NEW HAMPSHIRE	NORTH DAKOTA	ONTARIO	OREGON	QUEBEC	RHODE ISLAND	SASKATCHEWAN	SOUTH DAKOTA	VERMONT	WASHINGTON	WISCONSIN	WYOMING
10. Requirements for crossing highway																			
A. Must come to a complete stop	x	x		x	x	x	x		x	x	x	x	x	x	x	x	x	x	
B. Must yield to all vehicles	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x			
C. Must cross at right angles	x		x	x	x		x	x	x	x	x	x	x		x	x			
11. Minimum age for:																			
A. Driving on owner's property	none	none	none	none	none		none		none		none	none				none	none		none
B. Driving on highway where permitted	none					15			16	16				16	16				none
C. Crossing Highway	14		14	16	12	15	14	16	16	16	12	16	16	16	16	16	12		none
12. Equipment required																			
A. Headlight	x	x	x	x-2	x	x	x	x	x		x	x	x	x	x	x	x	x	
B. Taillight	x		x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	
C. Brake	x	x		x	x	x	x	x	x		x	x	x				x	x	
D. Muffler	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x			
13. Headlights required during day	No	No	No	No	No			No	No		Yes	No	No	No	No	No	No		
14. Liability Insurance required	Some	No	No	No	No	No	No	No	No	Yes			No	Yes	No		No	No	No
15. Accident report required																			
A. Injury Accidents	x	x	x	x	x	x	x	x	x	x	x	none	x	x	x	x	x		
B. Property damage above $	x	$100	$100	$100	$100	$100	$100	$50	$200	$200	$200	none	$100	$200	$100	$35	$200		
16. Requirements to operate																			
A. Driver's license		x		x		x		x	x	x	x	x	x	x					
B. Spec. Snowmobile license				x										x					
C. Spec. instruction course				x	x		x				x						x		

	ALBERTA	IDAHO	MAINE	MANITOBA	MICHIGAN	MONTANA	MINNESOTA	NEW HAMPSHIRE	NORTH DAKOTA	ONTARIO	OREGON	QUEBEC	RHODE ISLAND	SASKATCHEWAN	SOUTH DAKOTA	VERMONT	WASHINGTON	WISCONSIN	WYOMING
1. Number in Use (1000's)	30	12	60	20	207		260	40		170	6	225	2	20	10	26	10	168	10
2. Registration Required																			
A. Federally owned	x	x	x	x			x	x				x	x		x	x			
B. State Owned	x	x	x	x			x	x	x			x	x		x	x		x	
C. Used on owner's land		x		x		x		x				x	x					x	
D. Used in special events		x		x		x					x	x			x	x			
E. Other	x	x	x	x	x	x	x	x	x			x		x		x	x	x	x
3. Amount of registration fee	$5	$5	$10	$15	$9	$2	$12	$9	$4	$4	$12	$6	$10	$14	$10	$3	$15	$6	$8
4. Number of years covered	Indef.	1	1	3	3	1	3	1	2	2	2	1	1	1	1		3	3	1
5. Days permitted with out of state registration	10	15		30	20	30	30	0	30		60	90	30	90	60			30	
6. Display of registration No. required	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
7. Minimum height of registration number	3"	3"	3"		3"		3"		2"		3"					3"	3"	3"	
8. Where is operation prohibited																			
A. Limited access highways	x	x	x	x	x	x		x	x	x	x	x	x		x	x	x	x	x
B. State highways	x		x	x	x	x		x		x	x	x	x		x		x	x	x
C. R.R. Right-of-ways	x		x	x	x	x		x	x	x	x	x	x				x	x	x
D. City Streets	x		x	x	x	x		x		x	x	x		x			x	x	x
E. Other	x		x	x				x			x	x		x					
9. Where is operation permitted																			
A. Abandoned R.R. right-of-way	x	x	x		x						x	x	x				x		x
B. Unplowed roads	x	x	x		x	x		x	x		x	x		x	x	x	x	x	x
C. Highway shoulders	x	x		x						x				x	x			x	x
D. On highway to cross bridges		x	x		x									x	x			x	
E. Other	x			x	x	x		x		x	x	x		x		x	x		x

4. Noise level must be under 82 decibels when measured at 50 feet.
5. Stoplight must work with brake lever or throttle.
6. Must have two headlamps taillights and stoplights.
7. Must have handgrips for the passengers.
8. All moving parts are to be enclosed.

Courses of Instruction

At least four states: Michigan, Minnesota, Oregon and Washington require young persons to take a course of instruction before they are permitted to operate snowmobiles.

The O'Keefe Brewing Company of Rexdale, Ontario conducted 30 Snowmobile Safety Clinics during the 1970-71 season. Similar clinics were planned for the 1971-72 season. Subjects covered include preventive maintenance, laws, first aid, and insurance.

Wisconsin is conducting a series of 15-three-day workshops on snowmobile operation. A 58 page "Snowmobile Instructor's Course" has been prepared covering eight hours of instruction. Certificates are given to students 12 years of age and older who attend all sessions.

Several manuals for instructors are available. These include the following titles:

- Instruction Guide for Snowmobile Safety and Maintenance Program.
- Manitoba Snowmobile Safety Instructor's Manual
- Snowmobile Course - 1970
- Snowmobile Safety Training Program - 1971

Sources for these manuals are listed at the end of this report.

Films Available

The following films on snowmobile operation have been produced:

- Snow Power: O'Keefe Brewing Company, Ltd. One Carlingview Drive, Rexdale, Ontario
- Your Passport to Safe Winter Fun: Modern Talking Picture Service, 2000 L Street N.W. Washington, D.C. 20036
- Play Safe with Snowmobiles–14 Min: Ski-Doo Division Bombardier Ltd. 8600 Decarie Blvd. Montreal, Quebec.

Selected References

There are a number of useful publications on the subject of snowmobiling These are listed below together with the source for each.

Reference Publications

1. Alluring but Alarming Snowmobile–1969 pp4-7
   Family Safety Magazine–Winter
2. Careless Snowmobiling Can Get you in Trouble–1969 3pp by Dr. Raymond H. Dominici
   Maine Fish & Game, Augusta, Maine
3. Dangerous Don - Safety Sam–1971 24p
   Ontario Federation of Snowmobile Clubs
   1525 O'Connor Dr., Toronto 374, Ontario
4. Dan Guerney on Snowmobiles–October, 1971 pp148-150
   Popular Mechanics Magazine
5. A Guide to Minnesota Snowmobiling–1972 11pp
   Minnesota Dept. of Natural Resources
   625 No. Robert Street, St. Paul, Minn., 55101
6. Guide to Snowmobiling-1971 24pp
   Public Relations Dept., Johnson Motors, Waukegan, Ill. 60085
7. Guide to Snowmobiling in Alberta–1970 13pp
   Alberta Snowmobile Association, Box 605 Edmonton, Alberta
8. How to Organize Local Snowmobile Clubs –1971 19pp
   International Snowmobile Association, 5100 Edina Industrial Blvd., Minneapolis, Minn., 55435
9. Johnson Snowmobile Adventure Guide–1971 8pp
   Public Relations Dept., Johnson Motors, Waukegan, Ill. 60085
10. Maine Snowmobile Law–1971 11pp
    State Park & Recreation Commission, Augusta, Maine 04330
11. Manitoba Snowmobile Safety Instructor's Manual–1971 31pp
    Dept. of Mines, Resources & Environmental Management
    Winnipeg, Manitoba
12. Michigan Snowmobile Registration–folder
    Michigan Department of State, East Lansing, Michigan
13. Miles & Miles of Touring–October, 1971-S-14, S-15
    Field and Stream Magazine
14. Minnesota Snowmobile Safety–1969 44pp
    Minnesota Department of Conservation, 625 No. Robert Street, St. Paul, Minn., 55101
15. Minnesota Snowmobile Safety Laws–1971 19pp
    Dept. of Natural Resources, 625 No. Robert Street, St. Paul, Minn., 55101
16. Motorized Snow Vehicles Act–1968 20pp
    Ontario Department of Transport, Ferguson Block, Queen's Park, Toronto 182, Ontario

17. Motorized Snow Vehic'es in Ontario—folder
Ontario Department of Transport, Ferguson Block, Queen's Park, Toronto 182, Ontario

18. A Network of New Trails—October, 1971 S-3
Field and Stream Magazine

19. New Hampshire Snow Traveling Vehicle Law—1971 14pp
New Hampshire Department of Safety, Division of Motor Vehicles
John O. Morton Building, Concord, New Hampshire 03301

20. New York State Snowmobile Law—folder
New York State Joint Legislative Committee on Environmental Conservation, 150 State Street, Albany, New York 12207

21. New York State Snowmobile Rules & Regulation—1971 folder
Marine & Recreational Vehicles, Albany, New York 12226

22. Play Safe With Snowmobiles—1971 14pp
Ski-Doo Division, Bombardier Ltd., 8600 Decarie Blvd. Montreal, Quebec, Canada

23. Ride Safely—1971 23pp
International Snowmobile Industry Association, 5100 Edina Industrial Boulevard, Minneapolis, Minn., 55435

24. Snow Cruising Handbook—24pp
Evinrude Motors, 4143 No. 27th Street, Milwaukee, Wisconsin 53216

25. Snow Goer Magazine—84pp
Snow Goer Magazine, 1999 Shepard Road, St. Paul, Minn., 55116

26. Snowmobile Accident Summary—1971 6pp
National Safety Council, 425 No. Michigan Avenue, Chicago, Illinois 60611

27. Snowmobile Accidents—1971 2pp
by Dr. Raymond H. Dominici, Maine Fish & Game, Augusta, Maine

28. Snowmobile Accidents in Canada—1971 9pp
Canada Safety Council, 30 The Driveway, Ottawa, Canada

29. 1972 Snowmobile Buyers Guide—Jan. 1972 pp46-50
Motor Trend Magazine, P.O. Box 3290, Los Angeles, California 90028

30. Snowmobile Course—1970 19pp
Hamilton Automobile Club, 393 Main Street, Hamilton 20 Canada

31. Snowmobile Safety Handbook—1971 24pp
International Snowmobile Industry Association, 5100 Edina Industrial Boulevard, Minneapolis, Minn. 55435

32. Snowmobile Safety Program—4pp
International Snowmobile Industry Association, 5100 Edina Industrial Building, Minneapolis, Minn. 55435

33. Snowmobile Safety Training Program—1971, 58pp
Wisconsin Department of Natural Resources, Madison, Wisconsin

34. Snowmobile Trails-Basic Recommendations—1971 8pp
International Snowmobile Industry Association, 5100 Edina Industrial Boulevard, Minneapolis, Minn. 55435

35. Snowmobiles—1969 11pp
by U.S. Department of Commerce, Superintendent of Documents
U.S. Government Printing Office Washington, D.C. 20402

36. Snowmobiles in '72—October, 1971 pp154-157
Popular Mechanics Magazine

37. Snowmobiling—February 1971 pp27-32
Consumer Bulletin, Consumers Research, Inc. Washington, N.J. 07882

38. Snowmobiling in North Dakota—folder
North Dakota Motor Vehicle Department Capitol Building, Bismarck, North Dakota

39. Vermont Snowmobile Laws—1971 32pp
Vermont Department of Public Safety, Montpelier, Vermont

40. What the Law Makers May Do—October 1971 pS-20
Field and Stream Magazine

41. Wonderful World of Snowmobiles
International Snowmobile Industry Association, 5100 Edina Industrial Boulevard, Minneapolis, Minn. 55435

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